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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,194	08/08/2003	Holger Gryska	L&L-10061	3951
<div>7590 03/30/2007 LERNER AND GREENBERG, P.A. POST OFFICE BOX 2480 HOLLYWOOD, FL 33022-2480</div>			<div>EXAMINER FILE, ERIN M</div>	
			<div>ART UNIT 2611</div>	<div>PAPER NUMBER</div>
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/30/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/637,194

Applicant(s)

GRYSKA ET AL.

Examiner

Erin M. File

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed January 10, 2007, with respect to the rejection(s) of claim(s) 1, 2, 11, and 12 under Sano have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Choi and Kim.

Drawings

2. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. The drawings are objected to for failing to illustrate the details of independent Claim 1, which are also enumerated in Claim 11. Specifically the drawings fail to show despreading the received signal and comparing received signals with symbols that are known a-priori to the receiver and with received data symbols that are not known a-priori to the receiver and determined data symbols that are not known a-priori to the receiver.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi et al. (U.S. Patent No. 6,690,665).

Claim 1, Choi discloses after obtaining a despread signal by despreading a received signal (col. 2, lines 24-26), determining an interference power of the despread signal by

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comparing received symbols with symbols that are known a-priori to the receiver and with received data symbols that are not known a-priori to the receiver and determined data symbols that are not known a-priori to the receiver (col. 2, lines 27-33).

Claim 2, Choi further discloses the step of determining the interference power of the despread signal is performed in a signal path downstream from the receiver (col. 2, lines 24-33).

Claim 5, Choi further discloses determining a power of the symbols that are known a-priori and a power of the determined data symbols that are not known a-priori (col. 2, lines 27-33); and performing the step of determining the interference power of the despread signal by taking into account the power of the symbols that are known a-priori and the power of the determined data symbols that are not known a-priori (col. 2, lines 27-33).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (U.S. Patent No. 6,690,665) as applied to claims 1 and 11 above, and further in view of Sourour (U.S. Patent No. 6,865,218).

Claim 3, Choi discloses the step of determining the interference power of the despread signal is performed in a signal path downstream from the receiver. Choi fails to disclose that the receiver is a RAKE receiver, however, Sourour discloses a receiver which is a RAKE receiver (abstract, line 3). Because Sourour discloses that his receiver has the advantage of reducing multipath interference in the signal (abstract, lines 17-18), which increases the signal quality and reliability, it would have been obvious to one skilled in the art at the time of invention to incorporate the RAKE receiver as disclosed by Sourour into the invention of Choi.

Claim 4, Choi discloses a combiner configured downstream (fig. 3, 320). Choi fails to disclose:

- the receiver is a RAKE receiver having at least two RAKE fingers;
- the step of determining the interference power of the despread signal includes obtaining measured path interference powers by measuring individual path interference powers of each of the RAKE fingers and calculating the interference power from the measured path interference powers.

However, Sourour discloses:

- the receiver is a RAKE receiver having at least two RAKE fingers (col. 2, lines 2-3) and a combiner configured downstream from the RAKE fingers (col. 1, lines 65-67);
- determining the interference power includes obtaining measured path interference powers by measuring individual path interference powers of each of the RAKE fingers and calculating the interference power from the measured path

interference powers (col. 10, lines 65-67, interference estimates are combined to determined interference power, fig. 10, 230).

Because Sourour discloses that his receiver has the advantage of reducing multipath interference in the signal (abstract, lines 17-18), which increases the signal quality and reliability, it would have been obvious to one skilled in the art at the time of invention to incorporate the RAKE receiver as disclosed by Sourour into the invention of Choi.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (U.S. Patent No. 6,690,665) as applied to claim 1 above, and further in view of Choi et al. (U.S. Patent No. 6,690,665).

Claim 10, Choi fails to disclose using the interference power that has been determined for a channel-specific control of a signal-to-noise ratio on a downlink path, however, Sole discloses using interference power that has been determined for a channel-specific control of a signal-to-noise ratio on a downlink path (col. 1, lines 11-40). Using signal interference knowledge to control the channels of a downlink path has the advantage of reducing the signal degradation in a received signal by avoiding using signal paths which have a high signal interference. Because of this advantage it would have been obvious to one skilled in the art at the time of invention to incorporate the control as disclosed by Sole into the invention of Choi.

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9. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (U.S. Patent No. 6,690,665) in view of Kim et al. (U.S. Patent No. 6,868,112).

Claim 11, Choi discloses:

- a unit for providing a despread signal by despreading the signal that has been received (col. 2, lines 24-26);
- a channel estimator for determining channel parameters for the transmission channel (col. 2, lines 16-20);
- a receiver having an output (col. 1, lines 51-52, the receiver device inherently has an output, see fig. 3 which shows receiver output);
- a data symbol decision maker connected to said output of said receiver (fig. 3, 323 decodes or makes symbol decisions);
- a device for determining an interference power of the despread signal (col. 2, lines 27-33);
- after despreading a received signal (col. 2, lines 24-26), determining an interference power of the despread signal by comparing received symbols with symbols that are known a-priori to the receiver and with received data symbols that are not known a-priori to the receiver and determined data symbols that are not known a-priori to the receiver (col. 2, lines 27-33).

Choi fails to disclose:

- device for determining the interference power supplied with the channel parameters determined by said channel estimator;

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- said device for determining the interference power supplied with data symbols determined by said data symbol decision maker;

However, Kim discloses:

- device for determining the interference power supplied with the channel parameters determined by said channel estimator (col. 6, lines 50-52);
- said device for determining the interference power supplied with data symbols determined by said data symbol decision maker (col. 6, lines 50-52);

because Kim discloses that his device has the advantage of maintaining communications quality even in bad communications environments (abstract, lines 10-12). Because of this advantage it would have been obvious to one skilled in the art at the time of invention to incorporate the interference power estimation as disclosed by Kim into the invention of Choi.

Claim 12, Kim further discloses the device for determining the interference power receives detected symbols (col. 6, lines 50-52).

10. Claim 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (U.S. Patent No. 6,690,665) and Kim et al. (U.S. Patent No. 6,868,112) as applied to claim 11 above, and further in view of Sourour (U.S. Patent No. 6,865,218).

Claim 13, Choi discloses a combiner configured downstream (fig. 3, 320). Choi fails to disclose:

- the receiver is a RAKE receiver having at least two RAKE fingers;

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- the step of determining the interference power of the despread signal includes obtaining measured path interference powers by measuring individual path interference powers of each of the RAKE fingers and calculating the interference power from the measured path interference powers.

However, Sourour discloses:

- the receiver is a RAKE receiver having at least two RAKE fingers (col. 2, lines 2-3) and a combiner configured downstream from the RAKE fingers (col. 1, lines 65-67);
- determining the interference power includes obtaining measured path interference powers by measuring individual path interference powers of each of the RAKE fingers and calculating the interference power from the measured path interference powers (col. 10, lines 65-67, interference estimates are combined to determined interference power, fig. 10, 230).

Because Sourour discloses that his receiver has the advantage of reducing multipath interference in the signal (abstract, lines 17-18), which increases the signal quality and reliability, it would have been obvious to one skilled in the art at the time of invention to incorporate the RAKE receiver as disclosed by Sourour into the combined invention of Choi and Kim.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: how are the received, known, and decoded symbols in the interference power calculation compared in claims 1 and 11. It is unclear what symbols are compared and in what manner they are compared.

Allowable Subject Matter

13. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 1:00PM-9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571)272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

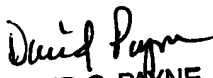
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erin M. File

EMF

3/26/2007


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